

ABSTRACT

In a first aspect of the invention, a first method is provided for hierarchical scheduling. The first method includes the steps of (1) receiving data from one or  
5 more pipes, each pipe including a plurality of pipe flows  
(2) selecting a winning pipe from the one or more pipes from which to transmit data based upon one or more quality of service parameters corresponding to the winning pipe (3)  
selecting a pipe flow from the plurality of pipe flows  
10 included in the winning pipe based upon one or more quality of service parameters corresponding to the selected pipe flow and (4) transmitting data from the selected pipe flow.  
Numerous other aspects are provided.